

IN THE CLAIMS:

Please amend claims 1, 7, 14, 22, 28 and 35 as set out in the following listing of the claims. This claim listing replaces and supersedes all prior listings of the claims.

1. (Currently Amended) A method for configuring and performing processing in a digital oscilloscope, comprising the steps of:

receiving one or more input signals by the digital oscilloscope;

receiving one or more input parameters by the digital oscilloscope;

defining a set of instructions input by a user to be associated with ~~a plurality of~~ one or more processing elements of the digital oscilloscope, based upon said one or more input parameters, to enable said processing elements to carry out said instructions and perform processing on the received input signals within the digital oscilloscope upon application of the associated processing element;

assigning a graphical representative for each ~~of the plurality of~~ said processing elements element; and

coupling one or more of the received input signals to one or more processing element graphical representatives; and

connecting ~~a plurality of~~ said respective ones of said processing element graphical representatives ~~corresponding to a plurality of the processing elements~~ to define and graphically depict a processing web for performing corresponding processing on said one or more received input signals within said digital oscilloscope.

2. (Original) The method of claim 1, wherein at least two of said plurality of processing elements are updated at different speeds.

3. (Previously Presented) The method of claim 2, wherein a processing object controls the update of said at least two of said plurality of processing elements.

4. (Previously Presented) The method of claim 2, wherein one of said at least two of said plurality of processing elements operates at an acquisition speed and another of said at least two of said plurality of processing elements operates at a display speed, and wherein the acquisition speed is higher than the display speed.

5. (Original) The method of claim 2, wherein said at least two of said plurality of processing elements are idle when not updated.

6. (Previously Presented) The method of claim 2, wherein one of said at least two of said plurality of processing elements is of a cumulative type running at a first speed, and another of said at least two of said plurality of processing elements is of a non-cumulative type running at a second speed, and wherein the first speed is higher than the second speed.

7. (Currently Amended) A method for configuring and performing processing in a digital oscilloscope, comprising the steps of:

receiving one or more input signals by the digital oscilloscope;

receiving one or more commands by the digital oscilloscope;

defining a set of instructions input by a user to be associated with a ~~plurality of~~ one or more processing elements of the digital oscilloscope, based upon said one or more commands, to enable said processing elements to carry out said instructions and perform processing on the received input signals within the digital oscilloscope upon application of the associated processing element;

assigning a graphical representative for each ~~of the plurality of~~ said processing ~~elements~~ element;

coupling one or more of the received input signals to one or more processing element graphical representatives;

connecting a ~~plurality of~~ said respective ones of said processing element graphical representatives of the processing elements to define and graphically depict a processing web for performing corresponding processing on said one or more received input signals within said digital oscilloscope; and

synchronizing said plurality of processing elements to generate a synchronized result.

8. (Original) The method of claim 7, wherein at least two of said plurality of processing elements are updated at different speeds.

9. (Original) The method of claim 8, wherein one of said plurality of processing elements requests required data from an upstream source.

10. (Original) The method of claim 9, wherein said request is made upon activation of an update pin of said one of said plurality of processing elements.

11. (Original) The method of claim 8, wherein one of said plurality of processing elements requests data from an upstream source when data is requested from it by a downstream processing element.

12. (Original) The method of claim 11, wherein no buffers are present between said plurality of processing elements.

13. (Original) The method of claim 7, wherein at least one of said plurality of processing elements receives M inputs on an input pin and produces N output results on an output pin, where M is an integer equal to or greater than 1 and where N is an integer equal to or greater than 0.

14. (Currently Amended) A method for configuring and performing processing in a digital oscilloscope, comprising the steps of:

receiving one or more input signals by the digital oscilloscope;

defining a set of instructions input by a user to be associated with ~~a plurality of~~ one or more processing elements of the digital oscilloscope, to enable said processing elements to carry out said instructions and perform processing on the received input signals within the digital oscilloscope upon application of the associated processing element;

assigning a graphical representative for each ~~of the plurality of~~ said processing elements element;

coupling one or more of the received input signals to one or more processing element graphical representatives;

connecting a ~~plurality of said~~ respective ones of said processing element graphical representatives of the ~~plurality of processing elements~~ in a predetermined relationship to depict a processing web and allow for a desired processing on said one or more received input signals within said digital oscilloscope; and

controlling said plurality of processing elements to manage a proper flow of data through the plurality of processing elements, whereby said digital oscilloscope processes said input signals.

15. (Previously Presented) The method of claim 14, wherein said controlling said plurality of processing elements is performed by updating one or more of said plurality of processing elements.

16. (Previously Presented) The method of claim 15, wherein a first of said plurality of processing elements is updated at a first speed, and a second of said plurality of processing elements is updated at a second speed, and wherein the first speed is higher than the second speed.

17. (Original) The method of claim 16, wherein the activation of said first and second processing elements are synchronized.

18. (Original) The method of claim 15, wherein said updating one or more of said plurality of processing elements is performed in response to notification that new acquisition data is available.

19. (Original) The method of claim 15, wherein said updating one or more of said plurality of processing elements is performed in response to a downstream request for data.

20. (Original) The method of claim 19, wherein said downstream request for data is made by a rendering processing object.

21. (Original) The method of claim 15, wherein said updating one or more of said plurality of processing elements is performed in response to a modification of the definition of any of said plurality of processing elements.

22. (Currently Amended) A processing web defining processing on input signals in a digital oscilloscope, comprising:

at least one input for receiving one or more input signals by the digital oscilloscope;

a set of instructions input by a user associated with ~~a plurality of~~ one or more processing elements of the digital oscilloscope, said instructions based upon one or more received input parameters, each of said plurality of processing elements performing a discrete processing function within the digital oscilloscope on the received input signals, each of said plurality of processing elements having a graphical representative assigned thereto and said processing elements operating to carry out the user-input instructions upon application of the associated instruction;

a coupling from said at least one input to one or more processing element graphical representatives; and

a plurality of connections between ~~said plurality of~~ respective ones of said processing elements being generated in accordance with manipulation of the processing element graphical representatives corresponding to said plurality of processing elements and an indication being generated of connections therebetween to define a flow of information therebetween, such that processing on said one or more received input signals within said digital oscilloscope is performed in accordance with the connected processing elements.

23. (Original) The processing web of claim 22, wherein at least two of said plurality of processing elements are updated at different speeds.

24. (Original) The processing web of claim 23, wherein a processing object controls the update of said at least two of said processing elements.

25. (Previously Presented) The processing web of claim 23, wherein one of said at least two of said plurality of processing elements operates at an acquisition speed and another of said at least two of said plurality of processing elements operates at a display speed, and wherein the acquisition speed is higher than the display speed.

26. (Original) The processing web of claim 23, wherein said at least two of said plurality of processing elements are idle when not updated.

27. (Previously Presented) The processing web of claim 23, wherein one of said at least two of said plurality of processing elements is of a cumulative type running at a first speed, and

another of said at least two of said plurality of processing elements is of a non-cumulative type running at a second speed, and wherein the first speed is higher than the second speed.

28. (Currently Amended) A processing web defining processing in a digital oscilloscope, comprising:

at least one input for receiving one or more input signals by the digital oscilloscope;

a plurality of processing elements defined by a user in accordance with one or more received user-generated instructions, each of said plurality of defined processing elements performing a discrete processing function within the digital oscilloscope on the received input signals and each having a graphical representative assigned thereto, said processing elements operating to carry out the user-generated instructions; and

a plurality of defined data connections connecting ~~said plurality~~ respective ones of said processing elements being generated in accordance with manipulation of the processing element graphical representatives corresponding to said plurality of processing elements and an indication being generated of connections therebetween to define a processing web for performing a desired processing on said one or more received input signals within said digital oscilloscope in accordance with the connected processing elements;

wherein said plurality of processing elements are synchronized to generate a synchronized result.

29. (Original) The processing web of claim 28, wherein at least two of said plurality of processing elements are updated at different speeds.

30. (Original) The processing web of claim 28, wherein one of said plurality of processing elements requests required data from an upstream source.

31. (Original) The processing web of claim 30, wherein said request is made upon activation of an update pin of said one of said plurality of processing elements.

32. (Original) The processing web of claim 28, wherein one of said plurality of processing elements requests data from an upstream source when data is requested from it by a downstream processing element.

33. (Original) The processing web of claim 32, wherein no buffers are present between said plurality of processing elements.

34. (Original) The processing web of claim 28, wherein at least one of said plurality of processing elements receives M inputs on an input pin and produces N output results on an output pin, where M is an integer equal to or greater than 1 and where N is an integer equal to or greater than 0.

35. (Currently Amended) A processing web defining processing in a digital oscilloscope, comprising:

at least one input for receiving one or more input signals by the digital oscilloscope;

a set of user-generated instructions associated with ~~a plurality of~~ one or more processing elements of the digital oscilloscope, each of said plurality of processing elements performing a

processing function within the digital oscilloscope on the received input signals upon application of the associated instruction, and each having a graphical representative assigned thereto; and

a plurality of connections defined by a user in accordance with said instructions for connecting ~~a plurality of said plurality of~~ respective ones of said processing elements in a predetermined relationship being generated in accordance with manipulation of a plurality of the processing element graphical representatives ~~corresponding to said plurality of processing elements~~ and an indication being generated of connections therebetween to allow for a desired processing within said digital oscilloscope on said one or more received input signals in accordance with the connected processing elements;

wherein said plurality of processing elements are controlled to manage the proper flow of data through the plurality of processing elements.

36. (Original) The processing web of claim 35, wherein said controlling of said plurality of processing elements is performed by updating one or more of said plurality of processing elements.

37. (Previously Presented) The processing web of claim 36, wherein a first of said plurality of processing elements is updated at a first speed, and a second of said plurality of processing elements is updated at a second speed, and wherein the first speed is higher than the second speed.

38. (Original) The processing web of claim 37, wherein the updating of said first and second processing elements are synchronized.

39. (Original) The processing web of claim 36, wherein said updating one or more of said plurality of processing elements is performed in response to notification that new acquisition data is available.

40. (Original) The processing web of claim 36, wherein said updating one or more of said plurality of processing elements is performed in response to a downstream request for data.

41. (Original) The processing web of claim 40, wherein said downstream request for data is made by a rendering processing object.

42. (Original) The processing web of claim 36, wherein said updating one or more of said plurality of processing elements is performed in response to a modification of the definition of any of said plurality of processing elements.